## **EAST Search History**

## **EAST Search History (Prior Art)**

Ref#	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	10266	"semiconductor energy laboratory"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2011/05/20 06:13
L2	3	1 and (antenna near5 "light emitting").clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2011/05/20 06:14
L3	2719	(257/53,64,83,84).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2011/05/20 06:59
L4	1640	(257/679,E23.064,E23.176,923). CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2011/05/20 07:07
L5	149	3 and antenna	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2011/05/20 07:07
L6	496	4 and antenna	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2011/05/20 07:07
L7	102	5 and @ad<"20050228"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2011/05/20 07:08
L8	305	6 and @ad<"20050228"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2011/05/20 07:08
L10	2	(antenna near5 "light emitting" with "light receiving").clm.	US-PGPUB	OR	ON	2011/05/20 07:27
S1	1125649	("integrated circuit" IC)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/29 14:09
S2	125	S1 and (TFT "thin film transistor") and antenna and ("light emmitting" "light-emmitting" LED) and ("light receiving" "light-receiving" photodiode)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/29 14:15
S3	108	S2 and @ad<"20060822"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/29 14:15
S4	57	S2 and @ad<"20040304"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/29 14:16
S5	52957	("ID chip" "IC card")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/29 16:35
S6	3	S5 and (TFT "thin film transistor") and antenna and ("light emmitting" "light-emmitting" LED) and ("light receiving" "light-receiving" photodiode)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/29 16:35

S7	3	S5 and (TFT "thin film transistor")	US-PGPUB;	OR	ON	2008/04/29
		and ("antenna" RF) and ("light emmitting" "light-emmitting" LED) and ("light receiving" "light- receiving" photodiode)	USPAT; EPO; JPO; DERWENT			16:38
S8	87	S5 and ("antenna" RF) and ("light emmitting" "light-emmitting" LED) and ("light receiving" "light- receiving" photodiode)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/29 16:38
S9	41	"4588880"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/29 16:40
S13	5186	343/700ms	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 09:15
S16	1125649	("integrated circuit" IC)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 09:18
S17	205	S16 and (TFT "thin film transistor") and antenna and ("light emitting" "light-emitting" LED) and ("light receiving" "light-receiving" photodiode)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 09:18
S18	52957	("ID chip" "IC card")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 09:19
S19	13	S18 and (TFT "thin film transistor") and (antenna "RF") and ("light emitting" "light-emitting" LED) and ("light receiving" "light-receiving" photodiode)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 09:19
S20	11	S19 and @ad<"20060822"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 09:24
S21	31	S13 and ("ID chip" "IC card")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 09:59
S22	0	S21 and (TFT "thin film transistor") and antenna and ("light emitting" "light-emitting" LED) and ("light receiving" "light-receiving" photodiode)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 10:00
S23	30	S21 and antenna	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 10:01
S24	29	S23 and @ad<"20060822"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 10:01
S25	123541	(TFT "thin film transistor")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 10:32
S26	6750	S25 and antenna	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 10:33

S28	3555	S26 and ("light emitting")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 10:34
S29	165	S28 and "light receiving"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 10:35
S30	86	S29 and @ad<"20040304"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 10:35
S32	1	"10590271"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 15:45
S33	1	S32 and integrally	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 15:46
S34	123541	(TFT "thin film transistor")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 16:19
S35	6750	S34 and antenna	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 16:19
S36	3555	S35 and ("light emitting")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 16:19
S37	165	S36 and "light receiving"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 16:19
S38	86	S37 and @ad<"20040304"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 16:19
S39	0	S38 and ("demodulating circuit" and "logic circuit")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 16:19
S40	1	S38 and ("demodulating " "demodulationn" and "logic circuit")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 16:20
S41	0	S38 and ("demodulating " "demodulationn") and ("logic circuit")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 16:22
S42	0	S38 and ("demodulating " "demodulationn") and ("logic ")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 16:22
S43	73	S35 and ("demodulating " "demodulationn") and ("logic ")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 16:23
S44	137	S35 and ("demodulating circuit" "demodulation circuit") and ("logic ")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 16:23
S45	89	\$35 and ("demodulating circuit" "demodulation circuit") and ("logic circuit")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 16:23
S46	3	S38 and ("demodulating " "demodulation") and ("logic ")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/04/30 16:24

S47	1	"10590271"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/05/01 08:39
S48	238127	S47 and integrally and first and second ad "connection terminal"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/05/01 08:39
S49	1	S47 and integrally and first and second and "connection terminal"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/05/01 08:40
S50	2	("20030052324").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/05/01 08:47
S51	1	S50 and substrate	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/05/01 08:47
S52	123697	(TFT "thin film transistor")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/05/01 08:54
S53	6767	S52 and antenna	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/05/01 08:54
S54	3565	S53 and ("light emitting")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/05/01 08:54
S55	71	S54 and ("second substrate" near5 plastic)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/05/01 08:55
S56	165	S54 and "light receiving"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/05/01 08:55
S57	3	S56 and ("second substrate" near5 plastic)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/05/01 08:55
S58	86	S56 and @ad<"20040304"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/05/01 08:58
S59	29	S55 and @ad<"20040304"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/05/01 09:01
S60	1	"10590271"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/10/23 09:11
S61	1	S60 and "radio wave"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/10/23 09:11
S62	2	("6590633"). PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/23 10:09
S63	2	S62 and semiconductor	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/10/23 10:09
S64	16	"4829166"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/10/23 11:53

S65	507234	antenna	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/05 14:06
S66	8381	S65 and (TFT "thin film transistor")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/05 14:07
S67	2284	S66 and ("light receiving element" PD photodiode)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/05 14:07
S68	1549	S67 and ("light emitting" LED)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/05 14:08
S69	503	S68 and @ad<"20040304"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/05 14:08
S70	21	("20020100941"   "20030052324"   "20030116790"   "20040152392"   "20050202595"   "4829166"   "5990496"   "6040520"   "6162656"   "6590633"   "6838773"   "7029950").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/05 14:10
S71	6	S70 and antenna	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/05 14:11
S72	16	"4829166"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/05 14:16
S73	0	"200580006883"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/05 14:17
S74	13	"1169036"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/05 14:18
S75	33	("3584928"   "3593292"   "3805255"   "4242576"   "4298793"   "4384288"   "4454414"   "4473825"   "4523297"   "4529870"   "4538056"   "4549075"   "4575621"   "4582985"   "4588880"   "4605844"   "4650981"   "4701601"   "4720626"   "4746787"). PN. OR ("4829166"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/05 14:27
S76	143127	(TFT "thin film transistor")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/12 12:47
S77	13571	S76 and ("light emmitting" light \$1emmitting LED)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/12 12:48
S78	1518	S77 and ("light receiving" "light- receiving" photodiode)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/12 12:48
S79	3	S78 and (receiving\$1transmitting receiver\$1transmitter)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/12 12:51

S80	1211	S78 and (receiving\$1transmitting receiver\$1transmitter receiving transmitting receiver transmitter)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/12 12:58
S81	145	S80 and card	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/12 12:59
S82	58	S81 and @ad<"20040304"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/12 13:00
S83	33	("3584928"   "3593292"   "3805255"   "4242576"   "4298793"   "4384288"   "4454414"   "4473825"   "4523297"   "4529870"   "4538056"   "4549075"   "4575621"   "4582985"   "4588880"   "4605844"   "4650981"   "4701601"   "4720626"   "4746787"). PN. OR ("4829166"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/12 13:28
S84	456742	("non single crystal" polycrystalline amorphous)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/13 14:16
S85	2	"20070168248"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/14 13:18
S86	3	"20070095926"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/14 13:18
S87	241	"6100804"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/14 13:20
S88	33	("3584928"   "3593292"   "3805255"   "4242576"   "4298793"   "4384288"   "4454414"   "4473825"   "4523297"   "4529870"   "4538056"   "4549075"   "4575621"   "4582985"   "4588880"   "4605844"   "4650981"   "4701601"   "4720626"   "4746787").PN. OR ("4829166"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/14 13:24
S89	9241	(235/380,492).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2009/05/14 22:32
S90	1	S89 and (TFT "thin film transistor") and ("light emmitting" "light- emmitting" LED) and ("light receiving" "light-receiving" photodiode)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/14 22:33
S91	92	S89 and (TFT "thin film transistor")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/14 22:34
S92	85	S91 and (receiving\$1transmitting receiver\$1transmitter receiving transmitting receiver transmitter)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/14 22:34

S94	43	S92 and ("light emitting" "light- emmitting" LED)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/14 22:35
S95	2	S94 and ("light receiving" "light- receiving" photodiode)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/14 22:35
S96	18	S94 and @ad<"20040304"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/05/14 22:38
S97	2	"20070176622"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/11/25 09:49
S98	2	S97 and antenna	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/11/25 09:50
S99	368992	("light receiving element" "photoelectric conversion device" photodiode PD) and (Ag Au Cu Pd Cr Mo Ti Ta W Al Fe Co Zn Sn Ni)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/11/25 10:33
S100	38641	S99 and ("light emitting" near5 (diode device))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/11/25 10:38
S101	9689	S100 and ("light receiving element" "photoelectric conversion device" photodiode PD) near5 (contact Ag Au Cu Pd Cr Mo Ti Ta W Al Fe Co Zn Sn Ni)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/11/25 10:53
S102	4242	S101 and @ad<"20040304"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/11/25 10:54
S103	9318	S100 and ("light receiving element" "photoelectric conversion device" photodiode PD) near5 (Ag Au Cu Pd Cr Mo Ti Ta W Al Fe Co Zn Sn Ni)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/11/25 10:56
S104	2626	S103 and (TFT "thin film transistor")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/11/25 10:56
S105	201	S104 and contact near5 (Ag Au Cu Pd Cr Mo Ti Ta W Al Fe Co Zn Sn Ni)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2009/11/25 10:59
S106	3	"20030052324"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 10:03
S108	2	S106 and (Polycrystalline amorphous)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 10:18
S111	1	"10590271"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 10:28
S113	1	S111 and ("non single crystal")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 10:29

S114	1	S113 and ("light emitting layer"	US-PGPUB;	OR	ON	2010/10/25
		"light emission layer" "active layer" "electroluminescent layer" "emission layer" "light generating layer" "luminescence layer" "liquid crystal layer" "EL layer")	USPAT; EPO; JPO; DERWENT			10:29
S115	171443	(TFT "thin film transistor")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 10:47
S116	14641	S115 and ("light receiving element" "photoelectric conversion device" photodiode PD "light receiving device" "light receiving structure" ("light receiving element" "light receiving device" "light receiving structure" ("photoelectric conversion" adj (device structure element)) photodiode PD))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 10:48
S117	935	S116 and ("light receiving element" "photoelectric conversion device" photodiode PD "light receiving device" "light receiving element" "light receiving device" "light receiving structure" ("photoelectric conversion" adj (device structure element)) photodiode PD)) near5 (Polycrystalline amorphous "non single crystal")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 10:50
S118	58	S117 and ("light emitting layer" "light emission layer" "active layer" "electroluminescent layer" "emission layer" "light generating layer" "luminescence layer" "liquid crystal layer" "EL layer") near5 (Polycrystalline amorphous "non single crystal")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 10:50
S119	48	S118 and @ad<"20050228"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 10:51
S120	16	S119 and "light emitting"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 10:58
S121	410465	("light emitting") near5 (structure diode element)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 12:17
S122	1527	S121 and ("light emitting layer" "light emission layer" "active layer" "electroluminescent layer" "emission layer" "light generating layer" "luminescence layer" "liquid crystal layer" "EL layer") near5 (Polycrystalline amorphous "non single crystal")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 12:18
S123	1284	S122 and (TFT "thin film transistor")	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 12:20

S124	425	"photoelectric conversion device"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 12:20
S125	224	S124 and @ad<"20050228"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 12:20
S126	25	S115 and ("light emitting layer" "light emission layer" "active layer" "electroluminescent layer" "emission layer" "light generating layer" "luminescence layer" "liquid crystal layer" "EL layer") near5 (Polycrystalline amorphous "non single crystal") with ("light emitting") near5 (structure diode element)	USPAT; EPO;	OR	ON	2010/10/25 12:55
S127	8	S126 and @ad<"20050228"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/10/25 12:55

5/ 20/ 2011 7:28:30 AM H:\ Workspaces\ 10590271.wsp